

received on the basis of the determined at least one cross-correlation value," as recited in independent claim 1 and its dependent claims.

Similarly, the cited prior art fails to disclose, teach or suggest the claimed receiver comprising "a first and a second modulation detector; means for determining at least one cross-correlation value between at least one training sequence of a received signal and a stored training sequence; and means for selecting a detector used for detection of a signal to be received based on the determined at least one cross-correlation value," as recited in independent claim 6 and its dependent claims. Similarly, the cited prior art fails to disclose, teach or suggest the claimed receiver comprising "a first and a second modulation detector . . . a first selector configured to select between the first and second modulation detectors, . . . ," as recited in independent claim 11 and its dependent claims.

It should be understood that the claimed invention relates to modulation detection in a receiver and is based on the idea of having at least two modulation detectors in a receiver and utilizing a cross-correlation value when selecting the detector to be used.

To the contrary, Lindoff merely discloses a method and apparatus for synchronization and modulation type detection, i.e., detection of a type of modulation used in a received signal (See, for example, Lindoff, col. 2, lines 19-23). However, modulation type detection is completely different from modulation detection. Accordingly, Lindoff fails to provide any teaching of relevance to the claimed invention.

In fact, Lindoff fails to disclose, teach or suggest a receiver or methodology utilizing at least two modulation detectors or any particular solution whatsoever for selecting a modulation detector to be used. Rather, Lindoff merely teaches on the subject of apparatuses and methods for modulation type detection.

Koch fails to remedy the above deficiencies of Lindoff because Koch merely discloses a receiver for a digital transmission system in which transmitted data includes a training data sequence, which is stored and subsequently utilized to formulate a channel impulse response and an estimate of the receiving quality of the receiver. Thus, the combined teachings of Lindoff and Koch fail to provide the claimed invention utilizing at least two modulation detectors in a receiver and utilizing a cross-correlation value when selecting the detector to be used.

Likewise, Kubo fails to remedy the deficiencies of Lindoff and Koch because Kubo merely teaches a technique in which a predetermined number of cross-correlation magnitudes for subsequent initial phases is added to each cross-correlation magnitude, and these sums are

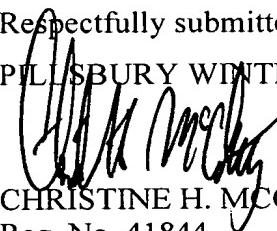
compared for performing the frame phase estimation. As a result, a frame phase estimation method and circuit can be realized with which an accurate frame phase can be estimated without being influenced by interference between signals or by noise. However, Kubo, and, as a result, the combined teachings of Lindoff, Koch and Kubo, fail to provide the claimed invention utilizing at least two modulation detectors in a receiver and utilizing a cross-correlation value when selecting the detector to be used.

Further, Yamaguchi fails to remedy the deficiencies of Lindoff, Koch and Kubo because Yamaguchi merely discloses a maximum likelihood sequence estimator including a sampling phase calculating part, a sampling processing part, a transmission path estimating part and a Viterbi algorithm processing part. However, Yamaguchi, and, as a result, the combined teachings of Lindoff, Koch and Kubo, and Yamaguchi fail to provide the claimed invention utilizing at least two modulation detectors in a receiver and utilizing a cross-correlation value when selecting the detector to be used.

Accordingly, the claimed subject matter of independent claims 1, 6 and 11 and their respective dependent claims it patentable over the cited prior art.

All objections have been addressed. If anything further is necessary to place the application in condition for allowance, Applicant requests that the Examiner contact Applicant's undersigned representative at the telephone number listed below.

Please charge any fees associated with the submission of this paper to Deposit Account Number 033975. The Commissioner for Patents is also authorized to credit any over payments to the above-referenced Deposit Account.

Respectfully submitted,  
  
PILLSBURY WINTHROP LLP  
CHRISTINE H. McCARTHY  
Reg. No. 41844  
Tel. No. 703.905.2143  
Fax No. 703 905.2500

Date: February 15, 2005  
P.O. Box 10500  
McLean, VA 22102  
(703) 905-2000